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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* JUN ISHII, REI FURUKAWA,  
YOSHIHIRO SHIIYA, and TAKEYOSHI AIHARA

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Appeal 2009-001368  
Application 10/642,542  
Technology Center 2800

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Decided: September 23, 2009

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Before KENNETH W. HAIRSTON, MAHSHID D. SAADAT,  
and KARL D. EASTHOM, *Administrative Patent Judges*.

SAADAT, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from a Final Rejection of claims 1, 4, 11, 12, and 15. Claims 16-33 are indicated as being allowable while claims 2, 3, 5-10, 13, and 14 are objected to by the Examiner for being dependent on rejected claims, but otherwise allowable if rewritten in independent form to include all the limitations of their base claim and those of any intervening claims. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

#### STATEMENT OF THE CASE

Appellants' invention relates to a synchronous playback system for reproducing a piece of music, a recorder and a player both forming parts of the synchronous player system (Spec. 1). According to Appellants, the synchronous player system makes plural instruments strictly synchronized by rescheduling the timing to supply pieces of first sort of music data such as, for example, note events through comparison between particular features of an audio waveform of a music passage recorded in a compact disc, and corresponding particular features of another audio waveform of the music passage recorded in another compact disc (Spec. 7). Claim 1, which is illustrative of the subject matter on appeal, reads as follows:

1. A recorder for recording a performance represented by pieces of first sort of music data in ensemble with a playback of a music passage represented by pieces of second sort of music data different in format from said first sort of music data, comprising:

an interface connected to

a data source of said pieces of said first sort of music data,

another data source of said pieces of said second sort of music data and

a destination to which a music data file is supplied;  
and

a data processing unit connected to said interface,  
extracting pieces of reference characteristic data representative  
of particular features of an audio waveform expressing said  
music passage from said pieces of said second sort of music  
data for synchronization between said performance and another  
music passage produced in another playback, and forming said  
pieces of said first sort of music data, said pieces of reference  
characteristic data and pieces of time data representative of  
timing to reproduce tones produced in said performance into  
said music data file for supplying said music data file through  
said interface to said destination.

The Examiner relies on the following prior art references in rejecting the claims:

Murakami	US 4,594,930	Jun. 17, 1986
Neuman	US 2003/0103076 A1	Jun. 5, 2003
Hagiwara	US 6,750,389 B2 (filed May 30, 2002)	Jun. 15, 2004

Claims 1, 4, 11, and 12 stand rejected as being unpatentable under 35 U.S.C. § 103(a) over Neuman and Murakami.

Claim 15 stands rejected as being unpatentable under 35 U.S.C. § 103(a) over Neuman and Murakami, in view of Hagiwara.

Rather than repeat the arguments here, we make reference to the Appeal Brief (filed May 7, 2007) and the Answer (mailed Aug. 1, 2007) for the respective positions of Appellants and the Examiner. Further, only those arguments actually made by Appellants have been considered in this decision. Arguments which Appellants did not make in the Brief have not been considered and are deemed waived. *See* 37 C.F.R. § 41.37(c)(1)(vii).

## ISSUE

With respect to claim 1, Appellants contend that Neuman describes using a “derivative file” as storing only the data relating to a characteristic of the input audio signal and is not the same as storing other data, such as the claimed data corresponding to another input signal (Br. 6). Appellants further assert that Murakami does not disclose saving “reference characteristic data” with the music data of a first type and timing data in a file and therefore, does not make up for the alleged deficiencies of Neuman (Br. 7). Appellants’ arguments present the following issue:

Have Appellants shown that the Examiner erred in combining the teachings of Neuman and Murakami to arrive at the claimed invention by disclosing “forming said pieces of said first sort of music data, said pieces of reference characteristic data and pieces of time data”?

## FINDINGS OF FACT

The following findings of fact (FF) are relevant to the issue involved in the appeal.

### *Neuman*

1. Neuman relates to resequencing a first input signal based upon a characteristic of a second input signal by analyzing the characteristic in the second input signal, and modifying the first playback sequence of the first input signal based upon the analysis of the characteristic to generate a second playback sequence. (Abstract; ¶ [0014].)

2. Neuman analyzes a second media file and samples a characteristic of the second media file. For example, the second media file may be an audio file that is analyzed for any sounds that exceed a pre-set

decibel threshold wherein all time data when the threshold is exceeded will be stored in a derivative file. If the second media file is a stream, i.e., real time, instead of a file, the derivative file would simply be a single value resulting from a real time analysis occurring at the sampled frequency. (¶ [0030].)

3. An output media file is then formed based upon the first media signal and the analysis of the second media signal (i.e., the derivative file). Later, the second media file and the output media file are played together. Specifically, when the derivative file so indicates, the system rearranges the playback sequence of frames of the first media file. (¶ [0031].)

4. Neuman discloses that the input signal may be of the type having audio formats such as MIDI or those of compact disks having audio tracks such as CD and DVD. (¶ [0048].)

*Murakami*

5. Murakami discloses an apparatus for synchronizing the playback rates of a plurality of music sources, in which automatic synchronization is established between a plurality of music sources. (Abstract; col. 1, 32-36.)

6. The apparatus for synchronizing the playback rates of a plurality of music sources generates a reference signal including beats representative of a desired tempo, produces a music signal representative of music, and extracts the beat involved in the music signal to produce a beat signal representative of the extracted beat. Further, a time difference between the occurrence of beats involved in the reference signal and the occurrence of the beat signal is determined and used in reproducing the music signal. (Col. 1, ll. 37-60.)

7. Murakami further discloses that a piece of music played back on the master player may be joined to any portion of a piece of music played back on the master player without causing unnatural connecting points. It will therefore be possible to insert an arbitrary portion of a piece of music into an arbitrary portion of another piece of music, reproduce a piece of music in synchronism with reference beats, and regulate the playback rates of three or more music sources in synchronism with each other. (Col. 7, l. 24 – col. 8, l. 11.)

## PRINCIPLES OF LAW

Section 103 forbids issuance of a patent when “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.”

*KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007).

“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1161 (Fed. Cir. 2007) (quoting *KSR*, 550 U.S. at 416). “One of the ways in which a patent’s subject matter can be proved obvious is by noting that there existed at the time of invention a known problem for which there was an obvious solution encompassed by the patent’s claims.” *KSR*, 550 U.S. at 419-20. The *KSR* Court further recognized that “[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp.” *Id.* at 421.

## ANALYSIS

### *Claim 1*

Based on our review of the teachings in Neuman and Murakami, we disagree with Appellants' argument and find no error in the Examiner's position. As asserted by the Examiner (Ans. 6-7), Neuman generates an output signal from a resequenced first input signal based on a characteristic of a second input signal (FF 1). Neuman uses a "derivative file" wherein characteristic data representative of the second input signal and the timing data related to the analyzed signal are stored (FF 2).

Contrary to Appellants' argument (Br. 6) that Neuman's derivative file is not described as the file for storing other data corresponding to another input signal, we find that Neuman uses the derivative file to produce a resequenced first input signal (FF 1). As disclosed by Neuman (FF 2-3), the first input data and the derivative file are used, based on the time data of the sampling of the second data, to generate the output or the rearranged playback (FF 3). Additionally, we agree with the Examiner (Ans. 7) that Appellants' arguments regarding the MIDI data and audio data on a CD as the claimed first and the second types of data (Br. 6-7) are concerned with features that are not recited in the representative claim 1.

Similarly, as argued by the Examiner (Ans. 7-8), Murakami was relied on for disclosing the details of the claimed characteristic data. In that regard, Murakami discloses synchronization between a plurality of music sources (FF 5) wherein the beat signal is "representative of timing to reproduce tones produced in said performance," as recited in claim 1. Beat tone is used in reproducing and supplying the playback music signal (FF 6). As discussed above, while Neuman does not discuss storing the first sort of

music data in the “derivative file,” storing the reference characteristic data with the first music data and the time data together is not required by the claim. Therefore, we disagree with Appellants that Murakami does not make up for the alleged deficiencies of Neuman (Br. 7), because Neuman discloses the claimed “forming said pieces of said first sort of music data, said pieces of reference characteristic data and pieces of time data . . . into said music data file.”

*Claims 4, 11, and 12*

Appellants assert patentability of these claims based on the arguments presented with respect to claim 1, which were found to be unpersuasive. Appellants further argue that the different formats disclosed in paragraph [0048] of Neuman do not indicate that they are used as the two audio signals of claim 4 (Br. 8).

We disagree because the teachings related to receiving two signals in Neuman are not limited to those disclosed in paragraph [0048], where Neuman merely suggests various types of data format, such as MIDI and CD. Appellants describe the “Red Book,” also recited in claim 4, as “[a]nother standard book . . . popular among the audio fans” (Spec. 2:1-2). Using any of the known formats constitutes using any of the finite number of predictable solutions for a known problem, which would have been obvious to one of ordinary skill in the art. *See KSR*, 550 U.S. at 421.

*Claim 15*

Appellants mainly rely on the same arguments made with respect to claim 1 and assert that Hagiwara does not make up for the features that are absent in Neuman and Murakami (Br. 8). For the same reasons discussed above regarding claim 1, we find no error in the Examiner’s position that the

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combination of the references would have suggested to one of ordinary skill in the art the subject matter recited in claim 15.

## CONCLUSION

For the reasons discussed above and provided by the Examiner, we conclude that Appellants have not shown that the Examiner erred in combining the teachings of Neuman and Murakami to arrive at the claimed invention by disclosing “forming said pieces of said first sort of music data, said pieces of reference characteristic data and pieces of time data.” Accordingly, we sustain the 35 U.S.C. § 103(a) rejection of claims 1, 4, 11, 12, and 15.

## ORDER

The decision of the Examiner to reject claims 1, 4, 11, 12, and 15 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

babc

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